Organic Lawn Care at GRC:

Summary:
NASA GRC's goal is to perform studies during the 2004 lawn care season to determine if organic lawn care (or, possibly, minimal lawn care) can replace the hazardous chemical processes currently being performed.

GRC lawn maintenance is currently provided by the contractor, Call Henry Inc. They provide mowing and insect/pest removal on request. All other maintenance is farmed out to a popular lawn care company, which uses many hazardous chemicals for weed control, shrub and tree insect and apple scab spraying, and grub control.

Don Musick, Bonnie Hassel, and Rich Olinek are reviewing other, more environmentally friendly options.

Organic methods are available which include strengthening the lawn against weeds by over-seeding, biobased fertilizers, and food-grade herbicides; strengthening trees against insects and disease with horticultural oil and seaweed extracts; and using noninvasive predator species as grub control. These methods have been successful for residential lawns locally. Large-scale organic care is a new area, but tests can be performed at varying levels of organic care, with control areas, to gauge success.

Starlings on lawn in front of Bldg 3

Detailed services: (input from Good Nature Organic Lawn Care)

Laboratory Soil Analysis
The organic care company will collect samples from around the area to get a picture of the different soil types. This information will help them balance the different nutrient levels in our soil. A well balanced soil will help to prevent weeds naturally.

Fertilization

Their organic fertilizers are the backbone of their system. Organic fertilizers add valuable nutrients and organic matter. The organic matter component is crucial because it functions as food for billions of beneficial soil organisms, which are vital to healthy soil.

Chemical fertilizers add nutrients but do nothing for the soil. In fact, their high salt content may even destroy the beneficial soil life. Without a high population of beneficial organisms, turf can become more vulnerable to weeds, insects, and diseases. With this increased vulnerability comes the need for more and more chemical treatments.

Because their organic fertilizers are very slow release, they will tend not to run off or leach into lakes and ponds.

What's in their fertilizers?

Their fertilizers do not contain any manures animal or human waste. They are blends of the following ingredients: Vegetable Protein Meals (Soy, Corn, Cocoa, Sugar Beets, etc.), Kelp Meal, Greensand, Compost, Dried Whey, Natural Nitrate of Soda, Soft Rock Phosphate, Natural Sulfate of Potash, and Oyster Meal. These ingredients will help build up soil and make chemical treatments less necessary.

Study:

A one-year study is one of the options. This study would be performed involving split study areas at GRC – each split area will be half control treatment (standard current chemical treatment) and half test treatment (full non-toxic organic care). The study may be performed with three test-type areas – full organic, chemical treatment, and no treatment at all). Data will be collected and analyzed for healthy insect indicator species, "weed" counts, thickness of grass, visual aesthetics (third-party objective observed qualities) and unsolicited input, or other data, as appropriate.

The study will evaluate the economic payback potential of switching to organic lawn care. The first year is expected be the most labor-intensive, to offset the "addictive" effects of years of chemicals and annual loss of predator insect species that allows prey insects to increase in number, to over-seed lawns and treat trees and shrubs to make them healthier. Subsequent years should become less costly. Demonstration of this organic regimen may promote such sustainable lawn care to other NASA facilities, other government facilities, and be an example to the public. This expanded demand, in turn, should reduce the cost of organic lawn care.

Written by Linda Sekura 12-30-03